Product: MOTOR GRADER
Model: 160M MOTOR GRADER B9L
Configuration: 160M Motor Grader B9L00001-UP (MACHINE) POWERED BY C9 Engine

Operation and Maintenance Manual
Caterpillar Corporate Radio
Media Number -M0085473-03 **Publication Date -01/02/2018** **Date Updated -14/02/2018**

s02590205

Foreword

Literature Information

This manual should be read carefully before using this product for the first time and before performing maintenance. This manual should be stored in the product literature holder or in the product literature storage area. Immediately replace this manual if lost, damaged, or unreadable. This manual may contain safety information, operation instructions, transportation information, lubrication information, and maintenance information. Some photographs or illustrations in this publication show details or attachments that can be different from your product. Guards and covers might have been removed for illustrative purposes. Continuing improvement and advancement of product design might have caused changes to your product, which are not included in this publication. Whenever a question arises regarding your product, or this publication, consult your dealer for the latest available information.

Safety

The safety section, if present, lists basic safety precautions. In addition, this section identifies the text and locations of safety messages used on the product. Read and understand the basic precautions listed in the safety section before operating or performing lubrication, maintenance, and repair on this product.

Operation

The operation section, if present, is a reference for the new operator and a refresher for the experienced operator. This section includes a discussion of gauges, switches, controls, attachment controls, transportation, and towing information (if applicable). Photographs and illustrations guide the operator through correct procedures of checking, starting, operating, and stopping the product. Operating techniques outlined in this publication are basic. Skill and techniques develop as the operator gains knowledge of the product and its capabilities.

Product Information

The product information section, if present, may provide specification data, product intended use, product identification plate locations, and certification information.

Maintenance

The maintenance section, if present, is a guide to equipment care. Proper maintenance and repair are essential to keep the equipment and systems operating correctly. As the owner, you are responsible for the performance of the required maintenance listed in the Owner Manual, Operation and Maintenance Manual, and Service Manual. The Maintenance Interval Schedule lists the items to be maintained at a specific service interval. Items without specific intervals are listed under the "When Required" service interval. The Maintenance Interval Schedule lists the page number for the step-by-step instructions required to accomplish the scheduled maintenance. Use the Maintenance Interval Schedule as an index or "one safe source" for all maintenance procedures.

Maintenance Intervals

Use the service hour meter to determine servicing intervals. Calendar intervals shown (daily, weekly, monthly, etc.) can be used instead of service hour meter intervals if they provide more convenient servicing schedules and approximate the indicated service hour meter reading. Recommended service should always be performed at the interval that occurs first. Under extremely severe, dusty, or wet operating conditions, more frequent lubrication than is specified in the maintenance intervals chart might be necessary. Perform service on items at multiples of the original requirement. For example, at every 500 service hours or 3 months, also service those items listed under every 250 service hours or monthly and every 10 service hours or daily.

Product Capacity

Additional attachments or modifications may exceed product design capacity, which can adversely affect product performance characteristics, safety, reliability, and applicable certifications. Contact your dealer for further information.

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Thu Mar 19 15:50:19 UTC+0530 2020

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i07214428

General Hazard Information

SMCS - 7606

WARNING

Do not operate or work on this equipment unless you have read and understand the instructions and warnings in the Operation and Maintenance Manuals. Failure to follow the instructions or heed the warnings could result in injury or death. Contact your Caterpillar dealer for replacement manuals. Proper care is your responsibility.

Foreword

This document is a supplement to the Operation and Maintenance Manual for the equipment. Permanently attach this document to the Operation and Maintenance Manual for the equipment.

Introduction

This document provides information about the operation of the Caterpillar AM/FM Radio System.

Operation of the equipment and the maintenance of the equipment must not occur unless the instructions and warnings in the Operation and Maintenance Manual for the equipment have been read and the instructions and the warnings are understood. The contents of this document must be understood before the equipment that is equipped with the CaterpillarAM/FM Radio System is operated.

Warnings and Compliance

Thank you for purchasing this product, read the manual carefully before operating, and reserve manual for future reference.

Precaution

- Use only in a 12-volt DC negative- ground electrical system.
- Disconnect the vehicles negative battery terminal while mounting and connecting the unit.
- When replacing the fuse, be sure to use one with an identical amperage rating.
- Using a fuse with a higher amperage rating may cause serious damage to the unit.
- Make sure that pins or obstacles do not get inside the unit, pins and obstacles may cause malfunctions, or create safety hazards such as electrical shock.
- If you have parked the vehicle for a long time in hot or cold weather, wait until the temperature in the vehicle becomes normal before operating the unit.

Before Operation

Do not raise the volume level too high. Keep the volume at a level at which you can hear outside warning sounds (horns sirens, and so on).

Stop the vehicle before performing any complicated operations.

Caution

Do not open the cover and do not repair. Ask your authorized dealer for help.

Note: According to models with different wiring harness to connect the definition of the specific content, refer to the model label.

Note: Specifications and the design are subject to change without notice due to improvements in technology.

Operation and Maintenance Manuals(OMM) are currently available at: www.cat.com/radio-owners-manual

For mobile equipment or equipment that is located in areas where direct internet access is not available while the product is in use, a paper copy of the OMM must be printed and kept with the product.

For more information or for a paper copy of the OMM contact your nearest Cat Dealer: www.cat.com/en_US/support/dealer-locator.html

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Declaration of Conformity 2
Regulatory Compliance 4

This is the sample of the manual if you need complete
manual
Click Here to download

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i07214449

Declaration of Conformity

SMCS - 7606

Table 1

CATERPILLAR®

EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

Caterpillar, Inc.

100 N.E. Adams

Peoria, IL 61629

USA

hereby declares that the product, object of this description:

Caterpillar DEA500 model entertainment radios

Brand: Caterpillar **Model: DEA500**

Part Numbers: 462-9618, 462-9619, 462-9620, 462-9621, 439-1562, 439-1563, 439-1564

Is in conformity with the relevant Union harmonization legislation: Directive 2014/53/EU

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ____Annex II, ___ X ___Annex III, _____Annex IV

2014/53/EU	LVD (Sec 3.1a):	EN 60950-1:2006 + A11:2009 + A12:2011 + AC:2011 + A2:2013
		EN 62479:2010
	EMC (Sec 3.1b):	EN 301 489-1 V2.2.0
		EN 301 489-17 V3.2.0
		EN 55020:2007+ A11:2011
		EN 55032:2015
		EN61000–3–2:2006 + A1:2009 + A2:2009
		EN 61000–3–3:2008
	RF (Sec 3.2)	EN 300 328 V2.1.1
		Final Draft EN 303 345 V1.1.7

Table 2

Notified Body Name: Dekra Testing and Certification, S.A.U.

Notified Body Number: 1909

Examination Certificate #: 53627RNB.001

Signature: James Morrison

Name: James Morrison
Title: Engineering Manager - 3

Place: Mossville, IL USA
Date: 3/7/2017

Illustration 1 g06233980

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i07214447

Regulatory Compliance

SMCS - 7606

FCC Notice

The following notices are provided.

Modification Statement

Caterpillar has not approved any changes or modifications to this device by the user. Any changes or modifications could void the users authority to operate the equipment.

Interference

This device complies with Part 15 of the FCC Rules and Industry Canada license - exempt RSS standards. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radiation Exposure

This device complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. RF Exposure guidelines can be found in Supplement C to OET65. The device also complies with RSS-102 of the IC radio frequency (RF) Exposure rules. Do not locate the transmitter near an antenna or operating with any other antenna or transmitter.

FCC Class B digital device notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. if the equipment is not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this device without the express approval may void the users authority to use this device.

CAN ICES-3 (B) / NMB (B)

This Class B digital apparatus complies with Canadian ICES-003.

Simplified EU Declaration of Conformity/RED 2014/53/ EU Directive

This device has been evaluated against the essential requirements of the 2014/53/EU Directive.

Radio Frequency Range

The following Driver Safety System communication device specifications are provided to aid in conducting any related hazard assessment and to ensure compliance with all local regulations:

Table 1

Bluetooth	
Frequency Range:	2402–2480 MHz carrier frequencies
Maximum RF output power:	+4dBm
Modulations:	GFSK: π/4–DQPSK and 8DPSK
Channel Spacing:	1 MHz
Number of channels:	79

Channel bandwidth:	1 MHz for GFSK,
Type of Antenna:	Brand Amotech part number: AL.A321C3 chip antenna/Gain 2.3dbi
Antenna gain:	+2.3dBi Max

Note: The DEA 500 radio can operate in Belgium without infringing on applicable requirements on the use of Belgiums radio spectrum.

Table 2

AM	
Frequency Range:	531 kHz to 1602 kHz
Maximum RF output power:	+/- 6dBi typical
Modulations:	Amplitude modulation
Channel Spacing:	9kHz
Type of Antenna:	0.75m typical monopole
Antenna gain:	0dBuV to 130dBuV

Table 3

FM	
Frequency Range:	87 MHz to 108 MHz
Maximum RF output power:	+/- 6dBi typical
Modulations:	Frequency modulation
Channel Spacing:	100 kHz
Type of Antenna:	0.75m typical monopole
Antenna gain:	0dBuV to 130dBuV

Table 4

English	Hereby, Caterpillar declares that this DEA500 is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EC.

To satisfy the essential requirements of 2014/53/EC Directive, the product is compliant with the following standards:

Caterpillar declares on our sole responsibility that the following product is in compliance with Directive 2014/53/EU and the essential requirements of Car Radio.

Type Designation:

- DEA500
- HW Rev A SW Rev B Services
- Frequency range and max output power: Bluetooth 2402 - 2480 Mhz 4dBm (2.5 mW) EIRP
- AM 531–1602 kHz
- FM 87.5–108.0 MHz

The conformity assessment per Directive 2014/53/EC has been followed with the involvement of the following Notified Body: DEKRA Testing and Certification no: 1909, S.A.U. Parque Technologico de Andalucla C/Servero Ochoa 2 29590 Campanillas - Malaga SPAIN performed an EU type examination and issued the certificate: 53627NRB.001.

Table 5

3.1 (a): Health and Safety of the User	EN 60950-1:2006 + A11:2009 + A12:2011 + AC:2011 + A2:2013
3.1 (b): Electromagnetic Compatibility	EN 301 489-1 V2.2.0, EN 301 489-17 V3.2.0, EN 55020:2007+ A11:2011
3.2: Effective use of spectrum allocated	EN 300 328 V2.1.1, EN 303 345 V1.1.1

There is no restriction for the commercialization of this device in all the countries of the European Union.

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i07316460

Radio - Entertainment If Equipped

SMCS - 7338

⚠ CAUTION

When driving, always keep your eyes on the road and hands on the steering wheel, paying careful attention to normal driving tasks. As always, the driver is responsible for safe vehicle operation. Not keeping your eyes on the road and hands on the wheel while driving could result in injury to you or others.

Introduction

Information included in this owners manual was accurate at the time of publication. Caterpillar, however, reserves the right to and performance without prior notice. Check with your dealer for details regarding changes that may have occurred since time of printing.

The Radio system is controlled by using the buttons, RSA, or steering wheel controls.

Stereo Receivers

Illustration 1 g03566500

MP3/USB/iPod/Aux/Bluetooth Receiver

Illustration 2 g03566527

MP3/USB/iPod/Aux/Bluetooth/CD Receiver

Illustration 3 g03566571

MP3/USB/iPod/Aux/Bluetooth/CD/SAT Receiver

Radio Pin out

Radio pinout is shown below

Cavity	Pin#	Function	I/O
A1	1	CAN-High	I/O
A2	2	CAN-Low	I/O
A3	3	Park Lights	I
A4	4	Ignition	I
A5	5	PWR_ANT/PA_MIC_PWR	O
A6	6	Dim PWM/ANALOG	I
A7	7	Battery	I
A8	8	Power Ground	I
B1	9	RR + (Speaker)	O
B2	10	RR - (Speaker)	O
B3	11	RF + (Speaker)	O
B4	12	RF - (Speaker)	O
B5	13	LF + (Speaker)	O
B6	14	LF - (Speaker)	O
B7	15	LR + (Speaker)	O
B8	16	LR - (Speaker)	O
C1	17	Power Ground	I/O
C2	18	Amp Sense	I
C3	19	Not connected	
C4	20	Cell_Tel_Mute	I
C5	21	ASWC (Analog Steering Wheel Control)	I
C6	22	Not connected	
C7	23	L_AUX_N 1	I
C8	24	AUX_SHIELD_GND	I
C9	25	AUX 1_COM	I
C10	26	R_AUX_N 1	I
C11	27	AUX 1_ON_OFF	I
C12	28	Not connected	
C13	29	Not connected	
C14	30	Not connected	
C15	31	MIC + (BAT)	I
C16	32	MIC - (BAT)	I
C17	33	Not connected	
C18	34	Not connected	
C19	35	Not connected	
C20	36	Not connected	

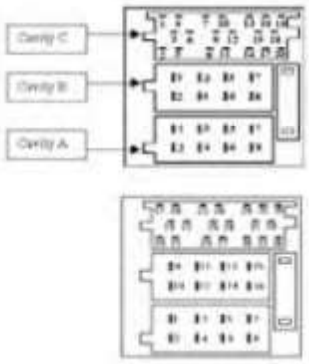

Illustration 4 g03566584

General Radio Receiver Functions

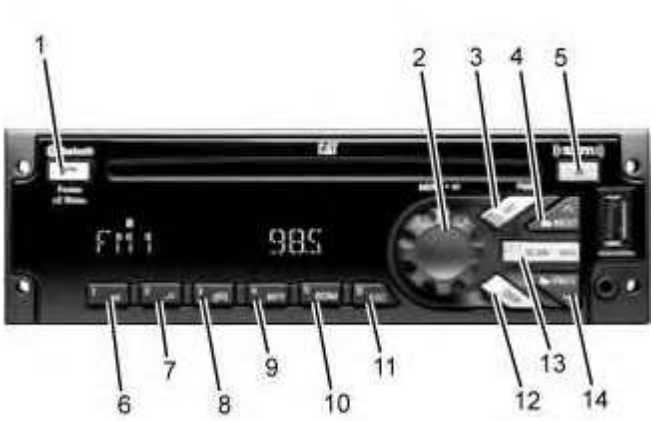

Illustration 5 g03566592

(1) Phone
(2) Knob
(3) SRC/PWR (Source/Power)
(4) Next
(5) Eject
(6) Play/Pause
(7) Browse
(8) Clock/Alarm
(9) RPT (Repeat)
(10) RDM (Random)
(11) ESC (Escape)
(12) DISP (Display)
(13) SCAN/ASCN (Scan/Autoscan)
(14) PREV (Previous)

Options

- An AM band with 6 AM presets
- Three FM bands with a total of 18 FM presets
- One weather band with six WX presets

SRC/PWR (Source/Power)

Press to switch to FM -> AM -> WX -> SXM -> CD -> USB/iPod ->AUX -> Bluetooth Audio (if equipped) and to turn Radio ON. Press and hold to turn radio OFF.

One Hour Timer

With the ignition off, pressing the SRC/PWR button will turn on the receiver and activate the receivers one-hour timer. The receiver will turn off after 1 hour or by pressing and hold the SRC/PWR button.

VOLUME KNOB/OK

Press for less than 3 seconds to display Audio Control Menu. Press for more than 3 seconds to show the user menu. Rotate to increase/decrease volume or during a menu for navigation. Press while in a menu to confirm the selected action.

PREV (Previous/Reverse)

Press to select previous track or station. Press and hold for FR or Tune Down

NEXT (Next/Forward)

Press to select next track or station. Press and hold for FF or Tune Up

EJECT

Press to eject the CD

Phone (if equipped)

Press the Phone button for more than 3 seconds to show the Bluetooth Menu. When Bluetooth is enabled, press the button to display the Dial Menu or to accept an Incoming Call (if a Phone is paired). During a call press the button for more than 3 seconds to transfer the call from the radio to the Phone.

CLOCK/ALARM

Press during Alarm activation to cancel the Alarm.

SCAN/ASCAN

Scans stations/CD tracks/MP3/WMA files and folder and in tuner, stores stations to presets

PLAY/PAUSE

Press to pause / un pause current Media.

RPT (Repeat)

Press to repeat current track. Press again to stop repeat. Look for the RPT icon in the radio display to turn this feature ON or OFF.

BROWSE

Press to navigate on the device and select a specific song or play context (Applicable to USB sticks, CD MP3 discs and iPod).

RDM (Random)

Press to play the tracks randomly. Press again to stop random mode. Look for the RDM icon to turn on in the radio display.

ESC (ESCAPE)

Press to exit one Menu Level.

If the system is equipped with Bluetooth, press the ESC button during Bluetooth call operation to reject or cancel a call.

DISP (DISPLAY)

If vehicle ignition is ON: Press to change source display

Press for more than 3 seconds to show the Clock for a short time.

Radio (Audio source)

To access AM, FM, WX, SXM (if equipped), iPod, USB, Rear Aux, Front Aux, CD, or BT Audio do one of the following:

1. Press the SRC radio button to scroll through the options and select desired option.
2. Press the SRC radio button and then scroll the source menu by knob rotation or NEXT/PREV short presses and then select by short-pressing the knob.

The CD/MP3, USB/iPod, Front AUX, and BT Audio shall be accessed only if the radio model supports those options and a device is connected/inserted for that specific source.

Note, if a device is connected through different sources at the same time, the functionality cannot be guaranteed (Device Dependent). Example: Device connected through Front Aux and Bluetooth or USB and Bluetooth at the same time.

AM-FM-WX Radio

Tuning: Set the desired "Tuner Configuration" following the steps in the Menu section.

If the radio is set to manual, the radio will allow for execution of the following functions:

- Execute manual tuning when the NEXT or PREV buttons are short pressed.
- Execute Seek when the NEXT or PREV buttons are long pressed.

If the radio is set to Auto, the radio will allow for execution of the following functions:

- Execute Seek when the NEXT or PREV buttons are short pressed.
- Execute manual tuning when the NEXT or PREV buttons are long pressed.

Manual tuning

The current frequency will be increased/ decreased by 1 step of 0.2MHz (USA FM mode), 10 kHz (USA AM mode) and one channel (25 kHz) in WX mode.

Seeking a Station

When the Seek function is activated, the radio increments/decrements the frequency until a tunable station is found.

If a tunable station is not found, the radio will display "NO STATION FOUND".

Presets

Storing Radio Station Presets:

1. Tune the desired frequency, and then long press any of the Preset(1-6) buttons until the radio produces a beep.

Tuning Radio Station Presets

1. Short press any of the Preset(1-6) buttons. The frequency stored at the preset location is tuned when the button is released.

Scan

To initiate the Scan function, short press the SCAN/ASCN button. When SCAN is initiated, the radio seeks up in frequency and stops on the next strong frequency for 8 seconds before continuing to seek for the next strong station.

If no station is found in two passes through the band, the radio will display “NO STATION FOUND” and then tune to the starting frequency.

Autoscan

This function temporally stores the strongest 6 stations of the current band in the presets until the radio is powered off or the source is changed.

AUTOSCAN does not store the frequencies on the presets on numerical order. Frequencies are stored based on the order they were found and on the quality of the frequency.

To initiate the AUTOSCAN function, long press the SCAN/ASCAN button until the radio performs a beep. Then the "AUTO SCAN" icon will blink while the radio is storing the temporary presets.

When the Autoscan process finishes, the radio will tune to the station stored in Preset 1 and the "AUTO SCAN" icon shall be illuminated while the mode is active.

To tune any of the 6 frequencies or to store new presets, follow the steps defined in the Presets section.

To exit this mode and return to the original presets execute any of the following actions:

1. Press and hold the SCAN/ASCAN button
2. Press the SCR/PWR button.
3. Turn off the radio.
4. Perform an ignition cycle
5. Disconnect the battery.

WX

The WX band is for the Governmental weather radio services frequencies. The radio can tune to the seven weather channels following the steps in Tuning, Presets, and SCAN sections.

SXM (If Equipped)

Vehicles with a valid SiriusXM® satellite radio subscription can receive SiriusXM programming. SiriusXM satellite radio has a wide variety of programming and commercial-free music, coast to coast, and in digital-quality sound.

SiriusXM®

SXM Display

When SiriusXM is active, the channel number, channel name, artist name/content info, song title, or category name could be displayed on the screen. SiriusXM may update the information at any time.

To change the current display view, short press the DISP button.

When a new channel is selected, a song change occurs, SXM source is selected (from power-up or source change) or the information is updated, all the elements will be displayed using paging. The paging can be stopped by short pressing the DISP button.

Display labels

To recognize the displayed text, the radio uses the following convention :

- Channel Number: CH
- Channel Name: CH

- Artist Name: ART
- Content Info: INFO
- Song Title: SONG
- Category name: CAT

SXM Categories

SiriusXM stations are organized in categories.

The category list for SXM is in the following webpage:
"http://www.siriusxm.com/sxm/pdf/sirius/channelguide.pdf"

To change the current category, long press the NEXT/PREV button and the radio will tune the first channel on next or previous category.

Category mode Enable/Disabled

Category Search Mode Enabled means that only channels in the current Category are searched. When enabled, the CATEGORY icon is turned on.

Category Search Mode Disabled means that all channels are searched. When disabled, the CATEGORY icon is turned off.

To enable/disable the category browse mode, follow the steps in the User Menu section

The default after a power-up is Category Disabled.

SXM Channel Selection

Presets and SCAN functions work the same as defined in the SCAN subsection of AM-FM-WX Radio.

NEXT button

While in SXM the radio will scroll to the next channel available in numerical order.

PREV button

While in SXM the radio will scroll to the previous channel available in numerical order

Note: If the SXM service is not activated, only the free-to-air channels will be present.

SXM Radio ID

If tuned to channel 0, "RADIO ID" label alternates with the SXM radio eight-digit code. This code is needed to activate the service.

DISP button does not work in channel 0. Channel 0 is not available in category mode enabled.

SXM Messages

SXM BUSY - The audio system is acquiring and/or processing audio and/or text data. No action is needed.

ART UNAVAIL - There is not Artist Name related with the current song.

SONG UNAVAIL - There is not Song Title related with the current song.

CHAN UNAVAIL - There is no Channel Name related with the current channel.

CHECK ANTENNA - SXM antenna or antenna cable is not connected to the radio or the antenna is shorted.

NO SIGNAL - SXM tuner module reports the No Signal condition. Under this condition only Channel 0 will work as stated in this manual.

CHAN UNSUB - Active channel has become unsubscribed or the requested channel is not unsubscribed.

SUBSCRIPTION UPDATED - PRESS OK TO CONTINUE - The subscription of the radio was updated. To remove the message and return to the previous state pres "OK" (Knob).

CH UNAVAIL - Requested channel is reported unavailable for a newly selected channel or the currently selected channel. Unavailable channels are in the legal channel range but are not currently available for display or subscription as a broadcast service. After 3 seconds the previous channel (if available) or channel 1 will be tuned.

iPod

This radio supports the following iPod models:

- iPod classic (sixth generation)
- iPod nano (6G)
- iPod touch (4G)
- iPhone (3G, 3GS, 4, and 4S)

Other iPods may be played, but functionality is not guaranteed.

Radio provides up to 1A of charge, so any device connected to the USB that requires less than 1 A will be charged.

There may be problems with the operation and function in the following situations:

- When, connecting an iPod on which a more recent version of the firmware is installed than is supported by the Radio
- When, connecting an iPod with firmware from other providers is installed

Playing from an iPod

To connect an iPod:

1. Connect one end of the standard iPod USB cable to the iPods dock connector.
2. Connect the other end to the USB port in the front radio display.
1. Radio will start playing the USB and shows the track number, Song, Artist, elapsed time, and Album information when available.
2. iPod music information displays on the radios display and begins playing through the vehicles audio system.
3. If the iPod is an unsupported model, it can be listened to in the vehicle by connecting to the auxiliary input jack using a standard 3.5mm (1/8 in) stereo cable.

Expected behavior when iPod is connected:

- The iPod battery recharges automatically while the vehicle is on.
- The iPod shuts off and stops charging when the vehicle is shut off.

iPod Menu

Use the following steps to navigate the iPod Menu:

1. Press the magnifying glass (preset 1) button while USB source (iPod connected) is active to access the iPod Menu.
2. Use the Volume Knob or Next/Prev button to navigate through the different options.
3. Use the iPod Menu to select.

Playlists

Use the following steps to navigate playlists:

1. Press to view the playlists on the iPod.
2. Select a playlist name to view a list of all songs in the playlist.
3. Select the song from the list to begin playback.

Artists

Use the following steps to navigate artists:

1. Press to view the artists on the iPod.
2. Select an artist name to view a list of all albums with songs by the artist.
3. Select an album.
4. Select the song from the list to begin playback.

Albums

Use the following steps to navigate albums:

1. Press to view the albums on the iPod.
2. Select an album name to view a list of all songs on the album or select All Songs to view all songs on the iPod.
3. Select the song from the list to begin playback.

Genres

Use the following steps to navigate genres:

1. Press to view the genres on the iPod.
2. Select a genre name to view a list of artists of that genre.
3. Select an artist to view albums or All Albums to view all albums of that genre.
4. Select Artist to view albums.
5. Select Album to view songs.
6. Select the song from the list to begin playback.

Podcasts

Use the following steps to navigate podcasts:

1. Press to view the podcasts on the iPod.
2. Select a podcast name to begin playback.

Songs

Use the following steps to navigate songs:

1. Press to view a list of all songs on the iPod.

2. Select the song from the list to begin playback.

Composers

Use the following steps to navigate composers:

1. Press to view the composers on the iPod.
2. Select the composer to view a list of songs by that composer.
3. Select a song from the list to begin playback.

Audio Books

Use the following steps to navigate audio books:

1. Press to view the audio books on the iPod.
2. Select the audio book from the list to begin playback.

When an iPhone or iPod Touch with iOS lower than iOS 5.0 is connected through USB or Bluetooth, the audio may not be heard when the iPod source is selected. To correct this situation, select either the dock connector in the phone or disconnect and reconnect the Apple device.

Note: iOS is the Apple Operative System.

Use the following controls to play the iPod:

PREV (Previous)- Press to seek to the beginning of the current or previous track.

Note: If the track has been playing for less than 10 seconds, it will seek for the previous track. If longer than 10 seconds, the current track starts from the beginning.

NEXT (Next) - Press to seek to the next track.

FF/FR (Fast Forward/Fast Reverse) - To fast forward or reverse through a track, press and hold Next or PREV button.

RDM (Random) - Press to play the tracks randomly. Press again to stop shuffle mode. Look for the RDM icon to turn on in the radio display.

RPT (Repeat) - Press to repeat current track. Press again to stop repeat. Look for the RPT icon to turn on in the radio display.

Error Messages - If an **"UNSUPPORTED"**message is displayed, it could be for one of the following reasons:

- When, the iPod connected is not supported (look at page X for the list of iPods supported).
- The iPod does not respond to the radio commands, in this case reset the iPod, and try again the connection.

If an **"NO MUSIC"** message is displayed, it could be for one of the following reasons:

- There are not any playable files in the iPod.

USB

Playing from a USB

A USB mass storage device can be connected to the USB port.

The USB port is in the front of the radio display.

Five volts DC power is limited to1 amp from this port. Devices such as iPad that require greater current will not charge from this port.

USB MP3 Player and USB Drives. The USB MP3 players and USB drive connected must comply with the USB Mass with the USB Mass Storage specification:

- MS-DOS partition only
- Class specification (ESB MSC) and supports formats of FAT32, FAT16, NTFS, and HFS+.
- Hard disk drives may be played, but are not supported.
- The radio will not be able to play write-protected music.
- MTP players are not supported.

The following guidelines must be met when creating MP3 files, otherwise the files might not play:

For MP3 Files:

- Bit rates: 32, 40, 48, 56, 64, 80, 96, 112, 124, 160, 192, 224, 256, 320 kbps for MPEG-1 Audio Layer 3.
- Sampling frequencies: 32, 44.1 and 48 kHz for MPEG-1 Audio Layer 3.
- Maximum number of folders: Eight folders with 255 files per folder.
- Maximum of 1,000 files on a disc.
- M3u and pls playlist versions supported
- Recorded on a CD-R or CD-RW with a maximum capacity of 700 MB.

For Unprotected WMA Files:

- Versions: 1, 2, 7, 8, 9 and 9.1.
- Bit rates: 32 - 320 kbps.
- Sampling frequencies: 32 - 48 kHz.

Playing a USB Device

Use the following steps to navigate and play a USB device:

1. Connect the USB and it begins to play.
2. Using the SRC Button selects the USB source.
3. Radio will start playing the USB and will show the track number, Song, Artist, elapsed time, and Album information when available.

Use the following controls to play the disc:

PREV (Previous)- Press to seek to the beginning of the current or previous track.

Note: If the track has been playing for less than 10 seconds, it seeks to the previous track. If longer than 10 seconds, the current track starts from the beginning.

NEXT (Next) - Press to seek to the next track.

FF/FR (Fast Forward/Fast Reverse) - To fast forward or reverse through a track, press and hold Next or PREV button.

RDM (Random) - Press to play the tracks randomly. Press again to stop shuffle mode. Look for the RDM icon to turn on in the radio display.

RPT (Repeat) - Press to repeat current track. Press again to stop repeat. Look for the RPT icon to turn on in the radio display.

Folder Up - Press to select next folder.

Note: If playing a specific playable scope, when pressed the radio will jump and starts playing track 1 as newly inserted USB.

Folder Down - Press to select previous Folder.

Note: If playing a specific playable scope, when pressed the radio will jump and starts playing track 1 as newly inserted USB.

SCAN:

- Short press to start the SCAN of the current playing context.
- Long press to SCAN the whole device starting on track 1.

Error Messages - If an **"UNSUPPORTED"**message is displayed, the error could be for one of the following reasons:

- When an MTP Player or a USB device with unsupported format or partition is connected.
- When the device is damaged.

- When the connected device was not connected as mass storage device.

If an **"NO MUSIC"** message is displayed, it could be because there are not MP3 or unprotected WMA files that can be played.

Front Auxiliary

In the front auxiliary mode, you can play an external device such as an iPod® or MP3 player via the auxiliary input jack on the front of the receiver.

To use an external device, simply connect the device via the auxiliary input jack.

Front auxiliary mode will not be available if no device is connected to the auxiliary input jack on the front of the receiver

Rear Auxiliary

In rear auxiliary mode, you can play an external device that you have connected via the receivers rear power auxiliary input lines.

To use an external device, simply connect the device via the auxiliary input jack and select it using the source button.

Rear Aux source will be available even when no device is attached to the rear input.

Bluetooth (If Equipped)

The radio can connect to a Bluetooth Device. To use this functionality your device requires Bluetooth and to be paired and connected to the radio.

Supports most Bluetooth devices.

You can connect up to 10 devices to the radio, the radio will connect to the first available paired device, starting from the last paired/connected device.

The Bluetooth Menu is available when the Phone button is pressed for more than 3 seconds. To navigate through it, rotate the knob.

The Bluetooth Menu consists of the following options: BT ENABLE, CONNECT PH, DISCONNECT PH, ADD PHONE, and DELETE PH (some options are only available when a device has been paired previously).

Enabling/Disabling Bluetooth

To Enable/Disable Bluetooth in your Radio (if it is not already activated):

- Press the phone button for more than 3 seconds while the Radio is ON. The Bluetooth Menu will be shown.

- Rotate the volume knob until the display shows: "BT Disable" or "BT Enable". Press the volume knob to Enable or Disable the Bluetooth.
- Press the Volume Know to Enable or Disable the Bluetooth.

When the device was previously paired, the Phone Icon will be active and the arrow icons will blink until the reconnection of the previously paired phones is attempted (each phone will be attempted three times).

Pairing a Bluetooth Device

To complete pairing the following steps must be followed:

1. Enable Bluetooth on the radio and on the device. Refer to your devices Manual for more information.
2. Pair the Device to the Radio:
    - Press the Phone button for more than 3 seconds The Bluetooth Menu will be shown.
    - Rotate the Volume Knob until the display shows: ADD PHONE.
    - Press the Volume Knob to confirm the action.

The radio will display ADDING PH for 3 seconds. In this discoverable mode, the Bluetooth status icon will blink for up to 3 minutes. If no phone was found, the radio will display NO PH FOUND and the Phone and arrows icon will be disabled.

During the discoverable mode, set your cell phone to add a Bluetooth device and look for the name "DEA500 RADIO":

- Follow the instructions on your phone to add a connection. When necessary, use the 4-number PIN 0000 to connect to the radio.
- When the cell phone has been successfully added, the radio will display PH CONNECTED and then the Bluetooth device name. The Phone Icon will be active on the display and the arrows will be disabled.
- When the radio connects, the Bluetooth icon will blink. The blinking icon signifies that the receiver is attempting to download the cell phones CONTACTS (for the DIAL CONTACTS function). The icon will cease to blink if all contacts have been downloaded or if the radio times out from receiving contacts from the cell phone. See your phones user guide for more information.

Note: If a device is connected through different sources at the same time, the functionality cannot be guaranteed (Device Dependent). Example: Device connected through Front Aux and Bluetooth or USB and Bluetooth at the same time.

Note: The iOS is the Apple Operative System.

Note: If the track has been playing for less than 10 seconds, it seeks to the previous track. If longer than 10 seconds, the current track starts from the beginning.

Connecting a Device

If your device was previously paired, you can simply connect to the device:

1. Press the Phone button for more than 3 seconds. The Bluetooth Menu will be shown
2. Rotate the Volume Knob until the display shows CONNECT PH.
3. Press the knob to confirm the action. Select the desired Device (rotate the knob and confirm by pressing the knob). The radio will show CONNECTING for 3 seconds.
4. When the radio connects, the radio will display PH CONNECTED and the Device Friendly Name, the Bluetooth icon will blink. The blinking icon signifies that the receiver is attempting to download the cell phones CONTACTS (for the DIAL CONTACTS function). The icon will cease to blink if all contacts have been downloaded or if the radio times out from receiving contacts from the cell phone device. Phone Icon will be active on the display.

Disconnecting a Device

If your device is connected and you required disconnecting it from the radio, follow the next actions:

1. Press the Phone button for more than 3 seconds. The Bluetooth Menu will be shown.
2. Rotate the Volume Knob until the display shows DISCONNECT PH.
3. Press the knob to confirm the action. The radio will show DISCONNECT PH for a short time. Once, the Phone is disconnected the radio will display DISCONNECTED and then the Bluetooth device name. The Phone Icon will be inactive.

Deleting one or all Devices

To delete a device from the radio, one or all devices previously paired:

1. Press the Phone button for more than 3 seconds. The Bluetooth Menu will be shown.
2. Rotate the Volume Knob until the display shows DELETE PH.
3. Press the knob to enter the submenu.
4. The radio will show a device list (navigate through it by rotating the knob). Select the device to be deleted or select DELETE ALL to erase all the paired devices in the list by pressing the Volume Knob. The radio will show PH DELETED.

Hands Free/Bluetooth Features

Once your device is properly paired (see Paring a Bluetooth Device) and connected (see Connecting a Device), the radio supports the following Hands Free features if the connected device has hands free functionality.

Dial Menu

The radio can retrieve the last calls and contact information from the device (Hands Free profile must be available in the device and sometimes the action must be accepted by the user).

The dial menu is accessed when the device is not in a call and the Phone button is pressed.

Dial/Redial

The user can retrieve the last phone number called and place a call. Press the Phone button and the last phone number called will be dialed.

Quick Dial

The radio can store phone numbers in any of the available preset buttons.

To save a phone number, you can select the contact using either the DIAL CONTACTS feature or the LAST CALLS feature. When the desired contact phone number is displayed, press and hold any of the PRESET buttons until you hear a beep confirming the phone number has been saved.

To dial a saved phone number, select QUICK DIAL from the menu and rotate the knob to select the appropriate PRESET number. Press the knob to place a call to saved phone number.

To change presets simply repeat the process with the desired phone number. Presets are overwritten.

Dial Contact

The radio is able to read and display cell phone contacts. Press the Phone button to show the DIAL MENU and rotate the knob until DIAL CONTACTS is shown, press the knob to select this feature. Rotate the knob to select between the different stored contacts (up to 500 numbers from the phone and 250 contacts from the SIM). Press the OK button if you want to dial to the listed contact.

The radio will download the following phone numbers from each contact (if available): HOME, WORK, MOBILE, OTHER, and PREFERRED. Within the menu phone numbers will be displayed as either: H, W, M, O, or P plus the 10-digit number (XXXXXXXXXX).

When the transfer is successful, the radio will show the DIAL CONTACTS submenu. Each time the radio connects to your phone, the DIAL CONTACTS submenu is updated, so you may need to repeat this manual operation as needed.

Last Calls

The radio is capable of listing the last 10 calls (DIALED, RECEIVED AND MISSED). Rotating the knob will navigate the user through the selected call list. Press the OK button to place the call.

This is the sample of the manual if you need complete
manual
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